IN THE CLAIMS

Please amend the following claims.

1. (Currently Amended) A composite leaf spring comprising:

a forward leaf spring segment defining an arcuate segment;

a rearward leaf spring segment; and

a mounting segment intermediate said forward leaf spring segment and said rearward leaf spring segment, said mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both said width and said depth, and wherein said continuously variable cross-sectional shape is defined such that any cross-section taken perpendicular to said mounting segment and within said mounting segment provides a singular unique cross-sectional shape within said mounting segment.

2. (Previously Presented) The composite leaf spring as recited in claim 1, wherein any cross-section taken perpendicular to said mounting segment and within said mounting segment defines a substantially equivalent cross-sectional area.

3. (Currently Amended) The composite leaf spring as recited in claim 1, wherein said ~~mounting segment~~ width ~~comprising~~ comprises a tapering width and said ~~mounting segment~~ depth ~~comprising~~ comprises an expanding depth.

4. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said rearward leaf spring segment defines a first arc in a first direction and said forward leaf spring segment defines a second arc in a second direction.

5. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said forward leaf spring segment is thicker in depth than said rearward leaf spring segment.

6. (Currently Amended) A suspension system comprising:

a composite leaf spring comprising a forward leaf spring segment defining an arcuate segment, a rearward leaf spring segment, and a mounting segment intermediate said forward leaf spring segment and said rearward leaf spring segment, said mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both said width and said depth, and wherein any cross-section taken perpendicular to said mounting segment and within said mounting segment defines a cross-sectional area equivalent to any other cross-section taken perpendicular to and within said mounting segment; and

an axle beam attachment system defining a cavity engageable with said mounting segment at only a single predefined location along said mounting segment.

7. (Currently Amended) The suspension system as recited in claim 6, wherein said ~~mounting segment~~ width comprises a tapering width and said ~~mounting segment~~ depth comprising an expanding depth.

8. (Cancelled)

9. (Previously Presented) The suspension system as recited in claim 6, wherein said axle beam attachment system comprises a mount attached to said composite leaf spring.

10. (Previously Presented) The suspension system as recited in claim 9, wherein said mount is an integral portion of said composite leaf spring.

11. (Cancelled)

12. (Currently Amended) The suspension system as recited in claim 9, wherein said mount comprises an upper clamp plate and a lower clamp plate, said upper clamp plate defines a first interior cavity and said lower clamp plate defines a second interior cavity, wherein a leaf spring

receipt cavity comprised of said first and second interior cavities corresponds to a leaf spring width and a leaf spring depth for attaching said mount at said single ~~predetermined~~ predefined location along said mounting segment.

13. (Previously Presented) The suspension system as recited in claim 6, further comprising an upper clamp plate and a lower clamp plate which defines said cavity when mounted together.

14. (Previously Presented) The suspension system as recited in claim 13, wherein said upper clamp plate and said lower clamp plate sandwich said composite leaf spring.

15. (Currently Amended) A suspension system comprising:

a composite leaf spring comprising a mounting segment intermediate a forward leaf spring segment defining an arcuate segment and a rearward leaf spring segment, the mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both said width and said depth, and wherein said width comprises a tapering width and said depth comprises an expanding depth such that any cross-section taken perpendicular to said mounting segment and within said mounting segment provides a singular cross-sectional shape; and

an axle beam attachment system which interlocks at a single predetermined location along said mounting segment.

16. (Cancelled)

17. (Currently Amended) ~~The suspension system as recited in claim 15,~~ A suspension system comprising:

a composite leaf spring comprising a mounting segment intermediate a forward leaf spring segment defining an arcuate segment and a rearward leaf spring segment, the mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both

said width and said depth, and wherein any cross-section taken perpendicular to said mounting segment and within said mounting segment defines a cross-sectional area equivalent to any other cross-section taken perpendicular to and within said mounting segment; and

an axle beam attachment system which interlocks at a single predetermined location along said mounting segment.

18. (Previously Presented) The suspension system as recited in claim 15, wherein said axle beam attachment system defines a cavity which surrounds a singular segment within said mounting segment to interlock said axle beam attachment system with said composite leaf spring.

19. (Previously Presented) The suspension system as recited in claim 18, further comprising a plurality of plates which define said cavity.

20. (Previously Presented) The suspension system as recited in claim 19, wherein said plurality of plates are fastened together to define said cavity.

21. (Previously Presented) The suspension system as recited in claim 19, further comprising an axle beam mounted to at least one of said plurality of plates.

22. (Previously Presented) A method of mounting an axle beam to a composite leaf spring comprising the steps of:

(1) defining a mounting segment along a composite leaf spring comprising a tapering width and an expanding depth such that any cross-section taken perpendicular to the mounting segment and within the mounting segment has a width and a depth, and defines a singular cross-sectional shape in both said width and said depth;

(2) mechanically interlocking an axle beam attachment system with a cross-sectional shape at a single predetermined location along the mounting segment; and

(3) mounting an axle beam to the axle beam attachment system such that the axle beam is transverse to the composite leaf spring.

23. (Previously Presented) A method as recited in claim 22, wherein said step (2) further comprises attaching an upper and lower plate together to define a cavity equivalent to the cross-sectional shape at the single predetermined location to at least partially surround and mechanically interlock the axle beam attachment system with the composite leaf spring.

24. (Previously Presented) A method as recited in claim 22, wherein said step (2) further comprises overmolding a molded material at the single predetermined location along the mounting segment to interlock the molded material with the composite leaf spring.

25. (Cancelled)

26. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said width of said mounting segment is constantly decreasing as said depth of said mounting segment is constantly increasing toward said rearward leaf spring segment.

27. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said forward leaf spring segment is of a greater depth and of a lesser width than said rearward leaf spring segment.

28. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said rearward leaf spring segment is of constant depth and width throughout a length thereof.

29. (Previously Presented) The composite leaf spring as recited in claim 1, wherein said forward leaf spring segment, said rearward leaf spring segment, and said mounting segment are manufactured of a substantially solid composite material.

30. (Previously Presented) The suspension system as recited in claim 6, wherein said cavity defines a shape that corresponds to a cross-sectional shape of the mounting segment at said single predefined location.

31. (Cancelled)

32. (Currently Amended) ~~The suspension system as recited in claim 6,~~ A suspension system comprising:

a composite leaf spring comprising a forward leaf spring segment defining an arcuate segment, a rearward leaf spring segment, and a mounting segment intermediate said forward leaf spring segment and said rearward leaf spring segment, said mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both said width and said depth, and wherein said continuously variable cross-sectional shape is defined such that any cross-section taken perpendicular to the mounting segment and within the mounting segment provides a singular unique cross-sectional shape within said mounting segment; and

an axle beam attachment system defining a cavity engageable with said mounting segment at only a single predefined location along said mounting segment.

33. (Currently Amended) ~~The suspension system as recited in claim 15,~~ A suspension system comprising:

a composite leaf spring comprising a mounting segment intermediate a forward leaf spring segment defining an arcuate segment and a rearward leaf spring segment, the mounting segment having a width and a depth, and a continuously variable cross-sectional shape in both said width and said depth, and wherein said continuously variable cross-sectional shape is defined such that any cross-section taken perpendicular to the mounting segment and within the mounting segment provides a singular unique cross-sectional shape within said mounting segment; and

an axle beam attachment system which interlocks at a single predetermined location along said mounting segment.